

FIG. 1A

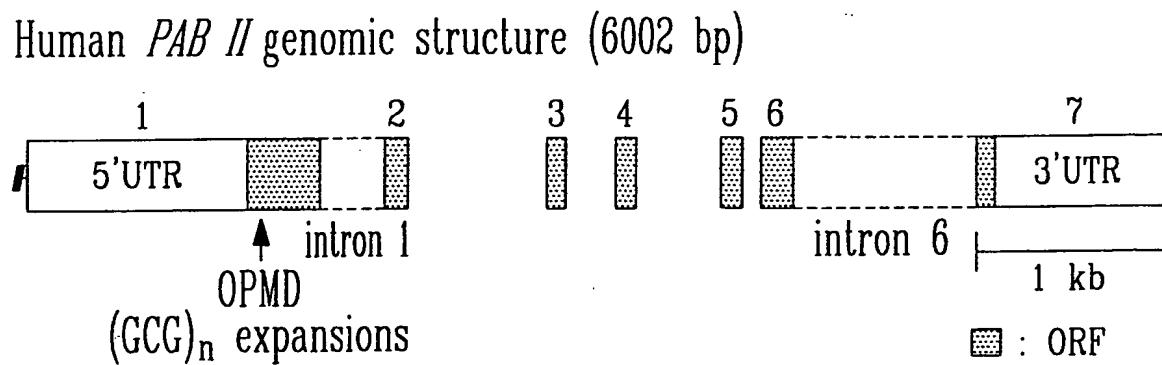


FIG. 1B

FIG. 2A FIG. 2B FIG. 2C FIG. 2D FIG. 2E

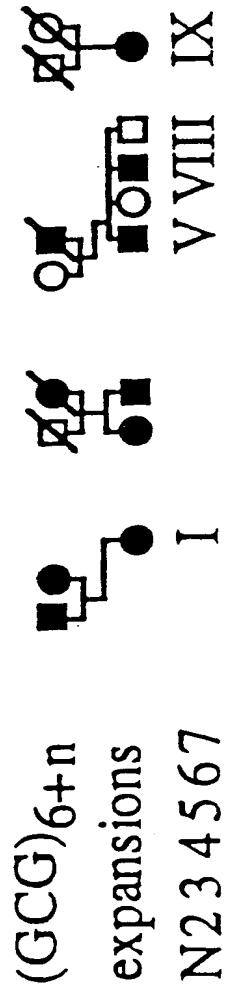


FIG. 2G

OPMD dominant mutations:

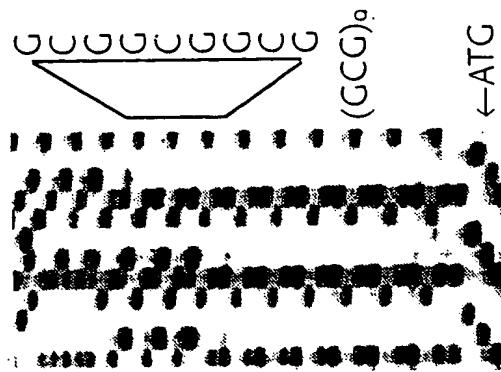
N: ATGGCGGGCGGGCGGGCAGCAGCA  
ATGGCGGGCGGGCGGGCG(GCG)<sub>2-7</sub>GCA

Polyalanine insertions:

N: MAAAAAA(A)2-7AAAAGAAG  
MAAAAAA(A)2-7AAAAGAAG

FIG. 2F

N ht. hm.



ATG

GATC GATC GATC

ATG  
GATC GATC GATC

(GCG)<sub>n</sub>

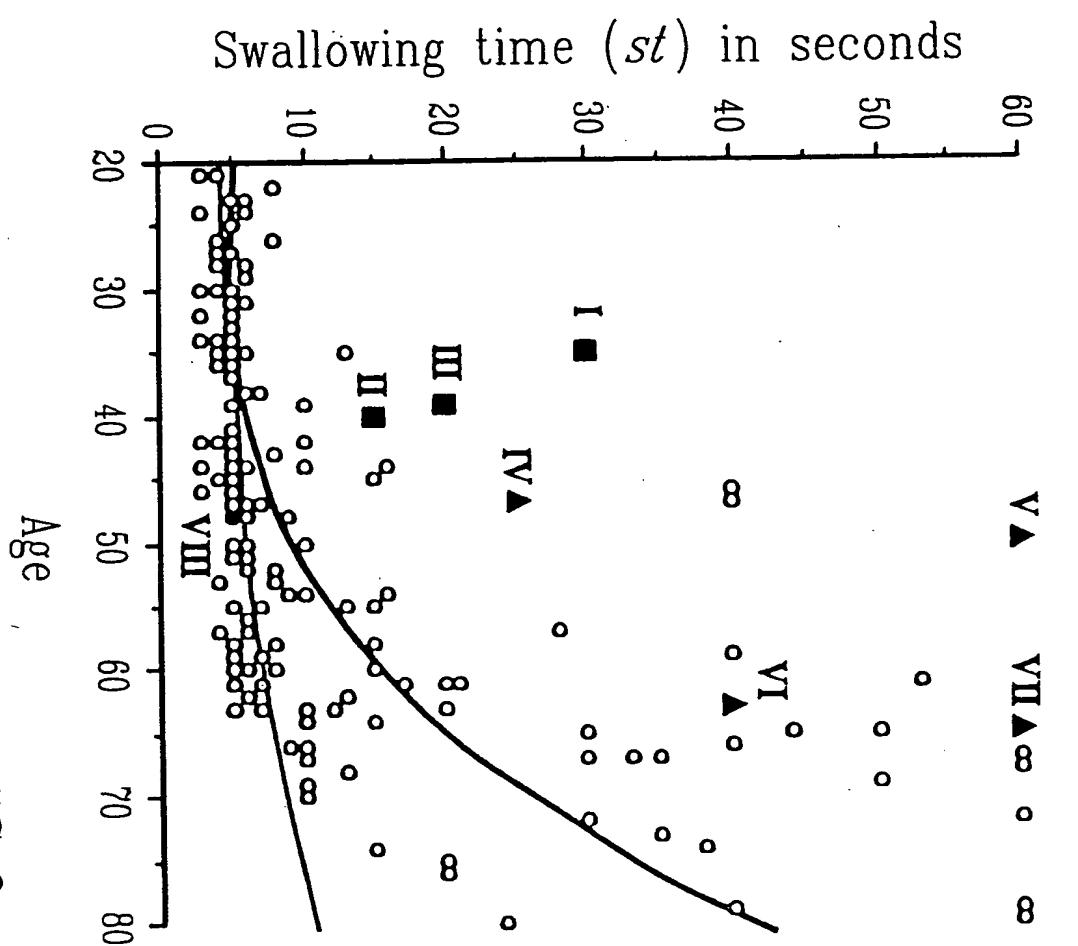


FIG. 3

1	aatgaagg	gacacccaa	tagcccaat	acaatgcct	gttcaatcaa	ccaaacatct
61	aaggcaca	tctatgttgt	agcatattgc	caggccgtga	gactgcgaat	ataaataagga
121	accggccctc	atctgcaggc	gctcaccaacc	tagttagcaa	acagtaaaac	aattaagcgc
181	gcccgtggaca	taggcccact	tgtcctggaa	aatgagggaa	agctggggtt	tgcagtgggt
241	tgtatgtagg	gggactacat	gttagaggca	cagactgggt	gcaggtacac	ccaaaggaaac
301	gagaagagt	gaagggaaaca	acatccacaa	agtaaccaca	tgctggcgta	tcgaaggccg
361	tgtatttacgg	ttttgagact	ttacctcgcc	agcaaagggg	ggccaggtctg	ttagcgggtgc
421	agatggagg	ggtgacattg	gaagctgtcc	agggaaaaga	aaatggaaact	ggggaggcaga
481	aggcctacgc	aaggggcgg	gacagacagg	acttgtact	agttagctctg	gactgaggaa
541	tcctccctgc	tttctggtgc	gggagagacta	gtggatgt	gtgccaataa	cctggatggg
601	gaaagtaagc	tccctccctgg	aatgcttcat	tcacaaccc	cattttcagc	aacatccat
661	ctactggtgc	ttcctggtgc	agataacaagt	ttcctgaaac	tgctgctctg	tttgggcct
721	cacccggcca	acagctcact	agctggcaag	cagtagtac	aagatggcgg	cccccstagga
781	ctggctagtc	atgtgaccc	gggtttccca	agtttgaagc	ccggcagtcc	tttgggggc
841	aaggttcacc	tgtcacgaaa	cggatgtcac	cccttcgact	ctcgcaagcc	aatggcattc
901	tgagactgg	ccactgcgg	gaggcgatcg	gaagatgtgt	cctttccagt	cgcctagcta
961	ggggccaatca	cggagcggtcc	catacttcgc	ggggccggcc	gtaggccgg	gagaaggcagg
1021	aatatcgtca	cagcgtggcg	gtattattac	ctaaggactc	gataggagggt	ggacgcgtg
1081	ttgattgaca	ggcagatttc	cctacggga	tttggagaatt	tggcgcgtg	ccgccttag
1141	agggtgcgtt	atttgattgc	caagtaataat	tcccaatgg	agtactagct	catgggtgacg

FIG. 4A

1201	ggcagggcagc	ttgagcta	atgtcctccac	tggccggcgc	agctctccac	atgcggggcg
1261	gcggggccca	gtctgagcgg	cgatggcggc	ggccggggcg	gcggcaggcag	caggggggc
1321	tgcgggcgg	cgggctccg	ggccggggcg	gcggcgccat	cttggcccg	gggcgggtgg
1381	ggagggccgg	gagggggccc	cggggggcgc	aggggactac	ggaacggcc	tggagtctga
1441	ggaactggag	cctgagggagc	tgctgctgga	gcccggacgg	gagccggagc	ccgaagagga
1501	gccggccgg	ccccggccc	ccccgggagc	tccggccct	gggcctgggt	cggagcccc
1561	cggcagccaa	gaggagggag	aggagccgg	actggtcgg	ggtgaccgg	gggacggcgc
1621	cattgaggac	cgggtgagga	aggagggcg	gcgagcaggc	cggcggtgg	cgcgtcactg
1681	gaggggcaga	gctcggcga	gcccgggcag	gccccgggtg	gggttgggg	ggaaataacg
1741	tggctgggc	gggtcgggc	ggggatgggt	cagcgatcac	tacaaggggc	ccgactggct
1801	tgattcggc	gtcacgggtg	ccttagtggtg	ttctagagag	gttagctttt	cttttatcac
1861	gaccctcgca	tgggggagg	gaaatggccg	agcatggctg	aggcgcgtc	tggccgagag
1921	cagggcacag	cccctgcgtt	ggttcctctt	aagctgtcct	ccataccctc	cccacttata
1981	ttaggagctg	gaagctatca	aagctcgagt	cagggagatg	gaggaagaag	ctgagaagct
2041	aaaggagcta	cagaacagg	tagagaagca	gatgaatatg	agtccaccc	caggcaatgc
2101	ttagtaactg	gcgggtgcac	gcggagccgg	ggttctggg	ttggaaagggt	tgtgggagg
2161	atgggaaatg	tgggttaga	tactcggcac	cctggagctg	cttggctgag	ctattatgac
2221	tgtggcgg	tcatagtcgg	ttgtgtgttc	ctctgacctt	tgtgaggcag	aactgatatt
2281	ttgggtgtgg	tagccttgtg	cctcccttgg	tcctgttata	attgtgttgc	tcttatttct
2341	tagtctacgt	ctatctttct	ttggtagaggg	ttgcgtgtc	gcatttgacc	ttcaaatcta

FIG. 4B

2401	atagttttc	ctccaatgg	agacgctta	ggattctaag	agaagaag	ctggaaggg
2461	ttccccc tt	aaattctaga	aatgtggagt	ctcagccac	ttaattttgc	tcactctta
2521	aagcatttc a	accaaagcc a	ttcattaggg	atttgatttg	gagggcagga	gggattccta
2581	tactgtttt a	agtgtgtatt	aattctttca	atttatcgaa	ttatttagtg	agtaacctgc
2641	tatgcactag	gcactattct	cggcttgtgg	gtacagcagg	gaacagcaca	gaccaaaatc
2701	tttgccttc a	ctgagcttat	gggatagtgc	tgggtgtgga	agtgcacat	atttgtcaag
2761	tagaaaacaa	gtgtgtgggt	tttgtaaaaa	attattttt	cctgatagct	ggcccggtga
2821	tcatgtccat	tgaggagaag	atggaggctg	atgccgttc	catctatgtt	ggcaatgtga
2881	cgtactggg	ctctgactgg	ggttggggc	aagtcttct	tttgggaat	tatttaata
2941	tcctgaaaga	acatctccgg	gatagatgtg	gttttgggtg	tggaggagt	gtgggaagga
3001	ggttaaaggt	aatggaatga	tcagtaatca	gcaaggctc	tgggttgg	aggaaaagag
3061	attaaattcc	caaattacca	gatttcatgt	gctttgggt	atgatggccc	agaccaaagg
3121	ctcggggagg	ttcttttag	acaggaattt	gcctgggtgc	tgtgaaattt	ttctcctctc
3181	atcagggtgg	ctatggtgca	acagcagaag	agctggaaagc	tcacttcat	ggctgtggtt
3241	cagtcaaccg	tgttaccata	ctgtgtgaca	aatttagtgg	ccatccaaa	ggtaaagtaa
3301	aggggagtaa	gttgagataa	ttaaattac	agtgtacaa	tagataaatt	atgtttata
3361	ttgagcagta	agttattttgg	tgttaacaca	ggtgatctgt	gtcatttaag	atcatggcat
3421	taatgttgt	atatcaggag	ttgcaccta	atgtcttcag	aggccagata	acaaaatga
3481	aggctagatg	tgggtggat	tacgaactag	aaggggaggg	gcagctcta	cttgcctat
3541	tatggcatat	ggaaattcag	gccctgtgtg	tcttattttt	acaaattca	aagagtagct

FIG. 4C

3601	ggaattttt	aaatttaat	gatttgcgaat	gattgaaatt	ttccatttag	aagaattttg
3661	acaataaaa	aatataactg	cattgtagcc	caaacgaag	catgcctgca	ggttgaattt
3721	gacctgttag	gtatttgtaa	cctcagagag	atacaatgac	aattttttc	aggtttgcggt
3781	atatagagt	ctcagacaa	gagtcaagtga	ggacttcctt	ggccttagat	gagtccctat
3841	ttagaggaag	gcaaataaag	gtaaggcctat	gtccattgtt	gttcttagttg	tgtataaact
3901	ctccagggtt	ccttaaggc	tatcatttgt	tcatctgttga	ctcaggttat	cccaaaacga
3961	accaacagac	caggcatcag	cacaacagac	cggggtttc	cacgagccg	ctaccgcgccc
4021	cggaccacca	actacaacag	ctcccgctct	cgatttaca	gtgggtttaa	caggcccc
4081	cggggtcgcg	tctacaggc	aggatagatg	ggctgctct	ctttcccccgg	cctcccggtga
4141	gccccgtatg	tctcctctc	tctgggtctga	ggaacccccc	tccccccacc	cctcccggtg
4201	gtcttcagga	actttgtctc	ctgcctgtgc	aggttggaa	aggttagttgc	aggccaggcc
4261	agaaggcagg	ctcatcatct	tttctgcagt	agaaatttgt	gataagggt	gcatccctcc
4321	cttggttcaa	agggttcc	accccaagcc	ttttttct	tgggagttgg	tggcatttga
4381	agggttttgc	ggacaact	gggaggaaca	gggcctccag	gaagtggaaa	gcactgcttg
4441	gacattttgtt	acttttcg	gggttaggaa	gggatttgaag	actgaaccc	ccttggaaaga
4501	ataccagagg	ctagctagtt	gatcctccca	acagccttgt	gggaggattt	ttagataactt
4561	attctttatt	ttagccagtc	ttgcaagggtt	aacttctcac	tggcctagt	gtggtnccca
4621	ggttttgcc	ttgcttcaact	tctgtctcta	cattaaata	gacgggttag	gcatataaac
4681	cttggcttt	cataagctt	actgtgcctat	ccccaggagt	tagggaggat	ctatttgtga
4741	aggcccttagg	gtttaaaaac	tgtggaggac	tgaaaactg	gataaaagg	gggtccctttt

FIG. 4D

4801	ccttgccct	gtctctact	cagatgcgt	tcttttgc	cactgttgg	caaagtttc
4861	tgttaagccc	ccctccct	gccccagttc	tcccaggc	gttactattt	ctgggatcat
4921	gggttcgtt	ttagacact	tgaacacttc	ttttcccc	ttcccttcac	agtaactggg
4981	gcagggccct	acggggagg	gcttgtactg	aactatctag	tgatcacgtt	aacacctaac
5041	tctccttctt	tcttccagg	gccgggctag	agcagacatc	tgttattccc	cttactaa
101	aaagtgtgt	ttaggaggg	agagaggaa	aaaagggaa	agaaggaaa	aaaaaagaat
5161	taaaaaaaa	aaaagaaa	acagaagatg	accttgatgg	aaaaaaaata	tttttaaaa
5221	aaaagatata	ctgtggaaagg	ggggagaatc	ccataactaa	ctgctgagga	gggacctgct
5281	ttggggagta	ggggagcc	cagggagtg	ggcaggggc	tgcttattca	ctctgggat
5341	tcgcacatgga	cacgtctaa	ctgcgcgaagc	tgcttgccca	tgtttccctg	cccccttcac
5401	cccccggc	ctgctcaagg	gttaggtggc	gtgggtggt	ggagggttt	tttacccag
5461	ggctctggaa	ggacacaaa	ctgttctgt	tgttacctc	cctccgtct	tctcctcgcc
5521	ttcacagtc	ccctcctgcc	tgctctgtc	cagccagtc	taccacccac	cccacccctc
5581	tttcccgcc	tcctgcccc	tccagatgc	ctggtgatct	attttgttc	cttttgtgtt
5641	tctttttctg	ttttgagtg	ctttcttgc	aggttctgt	agccggaaaga	tctcgttcc
5701	gctcccagcg	gctccagtg	aaatccct	tcccctgg	gaaatgcact	acctgtttt
5761	gggggttta	gggtgtttt	tgtttttcag	ttgttttgc	tttttgc	tttttttcc
5821	tttgccttt	ttcccttta	tttggggaa	atggggaa	gtggaaacag	ggaggtggaa
5881	ggtggattt	tttagtcatt	tccagggtg	ggaattttt	ttaatatgt	
5941	gtcatgaata	aagttgtttt	tgaaaataaa	aaaaaaa	aaaaaaa	
6001	aa					

FIG. 4E